DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
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> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 18-34 are rejected under 35 U.S.C. 102(e) as being anticipated by Hunton (US 2002/0191709 A1).

3. As per claim 18, Hunton teaches a method of preventing amplitude peaks (Hunton, Fig. 2 item 12) from appearing in a processed signal that has been generated from at least one baseband signal by one or more signal processing operations (Hunton, Fig. 2 item $S_1 \ldots S_k$), comprising: a) subjecting the baseband signal which is to be processed to a first peak cancellation (Hunton, Fig. 6 item 80) step including: deriving from the baseband signal a first estimate for the processed signal, including subjecting the baseband signal to an estimation filtering operation based on a set of filter coefficients (Hunton, Fig. 8 item 56, 72); assessing the first estimate to detect amplitude peaks (Hunton, Fig. 15 item 106); adjusting

the baseband signal to prevent any amplitude peaks detected in the first estimate from appearing in the processed signal (Hunton, Fig. 15 item 110, 104); and b) subjecting the adjusted baseband signal which is to be processed to at least one additional peak cancellation step including (Hunton, para [0018]): deriving from the adjusted baseband signal a second estimate for the processed signal, including subjecting the baseband signal to an estimation filtering operation based on the set of filter coefficients used in the first peak cancellation step (Hunton, Fig. 8 item 56, 72, 58); assessing the second estimate to detect amplitude peaks (Hunton, Fig. 15 item 106); further adjusting the adjusted baseband signal to prevent any amplitude peaks detected in the second estimate from appearing in the processed signal (Hunton, Fig. 15 item 110, 104, 106).

4. As per claim 19, Hunton teaches the method of claim 18, wherein one or more of the peak cancellation steps are performed in a forward direction only (Hunton para [0064]).

5. As per claim 20, Hunton teaches the method of claim 18, wherein in one or more of the peak cancellation steps the estimate for the processed signal is derived by simulating the effects of the one or more signal processing

operations performed to generate the processed signal (Hunton, para [0019]).

6. As per claim 21, Hunton teaches the method of claim 20, wherein deriving the estimate for the processed signal includes at least one of signal filtering and signal combination (Hunton, para [0019]).

7. As per claim 22, Hunton teaches the method of claim 18, wherein in one or more of the peak cancellation steps the assessment of the estimate for the processed signal includes a threshold decision (Hunton, para [0019] "threshold").

8. As per claim 23, Hunton teaches the method of claim 22, wherein the assessment involves a routine that produces a train of output signals at the time positions of peak maxima which are higher than a threshold (Hunton, para [0019] "exceed").

9. As per claim 24, Hunton teaches the method of claim 18, wherein in one or more of the peak cancellation steps the baseband signal to be processed is adjusted using a correction signal derived by way of filtering (Hunton, para [0019] "adjustment").

10. As per claim 25, Hunton teaches the method of claim 24, wherein during a particular peak cancellation step the filtering applied when deriving the estimate for the processed signal differs from the filtering applied when adjusting the signal to be processed (Hunton, para [0020]) .

11. As per claim 26, Hunton teaches the method of claim 18, further comprising determining and compensating at least a signal power loss that resulted from one or more of the peak cancellation steps (Hunton, para[0020] "power").

12. As per claim 27, Hunton teaches the method of claim 18, further comprising subjecting the signal to be processed to at least one clipping step (Hunton, para [0011]).

13. As per claim 28, Hunton teaches the method of claim 18, wherein a plurality of baseband signals in the form of individual carriers are in parallel subjected to a particular one of the peak cancellation steps (Hunton, para [0018]).

14. As per claim 29, Hunton teaches the method of claim 28, wherein during the particular peak cancellation step a combined estimate is derived for the plurality of carriers and wherein the assessment is based on the combined estimate (Hunton, para 14 "predictors" "combiners").

15. As per claim 30, Hunton teaches the a computer program product comprising program code portions for performing the steps of claim 18 when the computer program product is run on a computing device (As the method of claim 18 is known, a computer product implementing the claimed method cannot be considered as inventive).

16. As per claim 31, Hunton teaches the computer program product of claim 30, stored on a computer readable recording medium (The same reasoning applied as claim 30).

17. As per claim 32, Hunton teaches a peak cancellation stage (Hunton, Fig. 2 item 12) for preventing amplitude peaks from appearing in a processed signal that has been generated from at least one baseband signal (Hunton, Fig. 2 item $S_1 \ldots S_k$) by one or more signal processing operations, comprising: a first peak cancellation unit (Hunton, Fig. 6 item 80) including: a) an estimating element (Hunton, Fig. 8 item 72) for deriving from the

baseband signal to be processed a first estimate for the processed signal, wherein the estimating element comprises an estimation filter operating based on a set of filter coefficients (Hunton, Fig. 8 item 56); b) a detector (Hunton, Fig. 15 item 106) for assessing the first estimate to detect amplitude peaks (Hunton, Fig. 15 item 106); c) an adjusting element for adjusting the baseband signal to prevent any amplitude peaks detected in the first estimate from appearing in the processed signal (Hunton, para [0079] "106" "110"); at least one additional peak cancellation unit arranged in a signal path behind the first peak cancellation unit (Hunton, para [0018]) and including: a) an estimating element (Hunton, Fig. 8 item 72) for deriving from the adjusted baseband signal a second estimate for the processed signal (Hunton, Fig. 8 item 72), wherein the estimating element comprises an estimation filter operating based on the same set of filter coefficients like the first peak cancellation unit (Hunton, Fig. 8 item 72); b) a detector (Hunton, Fig. 15 item 106) for assessing the second estimate to detect amplitude peaks (Hunton, Fig. 15 item 106); c) an adjusting element for further adjusting the adjusted baseband signal to prevent any amplitude peaks detected in the second estimate from appearing in the processed signal (Hunton, Fig. 15 item 110, 104, 106).

18. As per claim 33, Hunton teaches the peak cancellation stage of claim 32, wherein one or more of the peak cancellation units have a first signal branch including at least the estimating element (Hunton, Fig. 8 item 72) and the detector (Hunton, Fig. 15 item 106) and a second signal branch arranged in parallel to the first signal branch (Hunton, para [0018]) and including a delay element (Hunton, para [0014] "delay circuit").

19. As per claim 34, Hunton teaches a transmitting device comprising the peak cancellation stage according to claim 32 (Hunton, para [0003]).

Conclusion

20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZEWDU KASSA whose telephone number is (571)270-5253. The examiner can normally be reached on Monday - Friday (7:30 - 5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Payne can be reached on 571 272 3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/David C. Payne/
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